

Bass River Subwatershed Dennis, Cape Cod, Massachusetts

The Bass River Subwatershed is located in the towns of Dennis and Yarmouth, with the easternmost portion in the Town of Brewster. It has an area of 10,331 acres. The Mid Cape Highway crosses the center of the watershed, and the area to the north is about half conservation land and water and half residential. A narrow industrial area lies south of the Mid Cape to the east of Exit 8. The town septage treatment plant and trash transfer station lie to the west of the exit. The former town landfill, now a golf course and recreation area, extends west to the boundary of the watershed. The area to the south is mainly residential with several large tracts of “developed” open space—two golf courses, a town recreation area, and a large tract of school property. The Route 28 business corridor traverses the southern end of the watershed.

The Bass River is heavily used for recreation. There are several town landings and marinas on its banks.

The Yarmouth Conservation Trust owns 18 acres of pine woods several blocks south of the industrial area and either owns or has conservation restrictions on nine other smaller properties (of one-third to two acres each) scattered throughout the watershed. The properties with conservation restrictions are located on Tupelo, Salt Box, and Weir Roads; and those that are owned are located on North Dennis Road at Weir Creek, Aunt Dorah’s Lane (two properties), Crab Creek Lane, Old Townhouse Road (east), Albert Street, and Tee Way.

Municipal water is available in almost all parts of this subwatershed. In 2001, the Yarmouth Water Department was installing 10 water services a week, which is a large rate of growth. There are no municipal sewers in the towns of Dennis or Yarmouth. Most of the developments in this watershed are served by on-site septic systems as their means of sanitary wastewater treatment. A Yarmouth-Dennis septage treatment plant with a capacity of 22 million gallons/year is currently handling 17-18 million gallons/year from all over Cape Cod.

Stewards:

- Dennis Water Quality Advisory Board
- Yarmouth Conservation Trust
- Brewster Ponds Water Quality Stewards

Studies conducted in the watershed:

- Cape Cod Coastal Embayment Project – Nitrogen Loading Analysis of the Upper Bass River System. 1998. Cape Cod Commission.
- Bass River Flushing Study. Conducted by Aubrey Consulting in 1996.

Who is collecting water quality data and where:

- The Brewster Ponds Water Quality Stewards are volunteers who conduct dissolved oxygen, temperature and water clarity tests bi-weekly and collect and deliver water samples monthly to the North Atlantic Coastal Laboratory for analysis. Samples are collected from Pine Pond, in the eastern portion of the subwatershed.

Management actions taken:

- Towns of Yarmouth and Dennis are working with the State Office of Transportation to acquire title to the railroad right of way and extend the Cape Cod Rail Trail.
- Town of Yarmouth is currently developing a Waterways Management Plan for fresh and marine waters throughout the town (2002).
- Massachusetts Division of Fisheries and Wildlife stocks Long Pond with rainbow, brook, and brown trout.
- Town of Dennis has been implementing BMPs at Follins Pond and water quality appears to be improving.
- Town of Yarmouth received a FY03 Coastal Pollution Remediation-4 the Environment Grant for its Bass River Project. \$31,200.
- The Cape Cod Salties conducted an eel grass planting project.

Subwatershed facts: (For data sources see Appendix)

- 21 E sites: 6, located at: 149 River St.; 1282 Main St.; Anniversary Park North St.; Residence, 105 N. Main St.; N. Dennis Rd. and Main/Whites Path; and Cape Cod Carrier Corps. Commonwealth Ave.
- Solid waste sites: 3
- Zone IIs located in this watershed: 5
- Interim Wellhead Protection Areas (IWPAs): 4
- Percent of the undeveloped land that is protected (according to 1985/1990 data): 28.2%
- Acres of existing wetlands: 370
- Certified vernal pools: none
- Named freshwater ponds: James, Miss Thatcher's, Mill, Follins, Dinahs, Cat Swamp, Flax, Lily, Labans, Long (*Yarmouth*), Flax, Run, Northern Simmons, Southern Simmons, Clay, Grassy, Cash, Aunt Patty's, Baker's, Whittemore's, Fresh, Kelley's, Stephen's (*Dennis*), Pine, Elbow (*Brewster*)
- Named rivers or creeks: Bass River (*Dennis/Yarmouth*), Weir Creek (*Dennis*), Hamblins Brook (*Yarmouth*)
- 1998 Massachusetts 303(d) List of Impaired Waterbodies: A segment of the Bass River, from Route 6 to the mouth at Nantucket Sound – pathogens.
- Shellfish growing areas: Bass River is conditionally approved for shellfish harvesting. Follins Pond is a priority growing area for soft shell clams.
- Beach Closures: West Dennis Beach, Follins Pond, and Flax Pond were each closed to swimming for at least one day during the 2001 season due to high enterococcus bacteria counts.
- This watershed contains Natural Heritage and Endangered Species Program (NHESP) Estimated Habitats of Rare Wildlife.

Priorities:

- The former Cape Cod Watershed Team requested in 2000 that the upper portion of Bass River be added to the Massachusetts 303(d) List. This recommendation is based on the Cape Cod Commission 1998 Coastal Embayment Project.
- Expand the Town of Yarmouth's Waterways Management Plan to include water quality monitoring for nutrients.
- Implement BMP on storm drain along Route 28 that discharges directly to Bass River. Work with Massachusetts Highway Department to correct. (NRCS).

- Pine, Long, and Flax Ponds need volunteers to participate in the Pond and Lakes Stewardship Project (PALS), measuring water quality and other characteristics of the ponds.
- Examine storm water runoff impacts to Follins Pond and identify locations for BMPs to reduce impacts from runoff.
- Expand Cape Cod Rail Trail.
- Initiate water quality monitoring program on the Bass River for nutrients and bacteria to participate in the Estuaries Project, Southeastern Massachusetts Embayment Restoration. Work with Estuaries Project to develop a QAPP.
- Conduct water quality monitoring for nutrients and bacteria in Follin's Pond.
- Implement those salt marsh restoration projects identified in the 2001 *Cape Cod Atlas of Tidally Restricted Salt Marshes* that have been evaluated and prioritized by the town. Sites include: Penn Central Railroad bridge and Route 6 restrictions of Bass River (Site YA-11/DE-13), Wheatfield Lane restriction of unnamed channel (DE-3), Fisk Street restriction of Kelley's Pond (DE-4), Lower County Road restriction of Weir Creek (DE-5), and Lower County Road restriction of channel from Uncle Stephan's Pond (DE-6).
- Acquire open space. Parcels considered a priority for acquisition for water supply protection and development: Dennis Tracts 14, 15, 17, 18, and 20 and Yarmouth Tracts 1, 8, 9, 12, 14, and 20 were ranked as having medium or high water supply development potential in the Cape Cod Commission's *Priority Land Acquisition Assessment Project* (April 1999). These tracts are located throughout the towns of Dennis and Yarmouth.

Recreation:

Camping areas: Airline Mobile Home Park

Golf courses:

- Dennis Pines Golf Club, Dennis Highlands Golf Club, Bass River Golf Course, Blue Rock Par 3 Golf Course

Pathways and trails:

- 5 trails in the Fresh Pond Conservation Area
- Johnny Kelly Recreation Area 1 ½ mi trail
- www.capecodcommission.org/pathways/trailguide.htm

Public access:

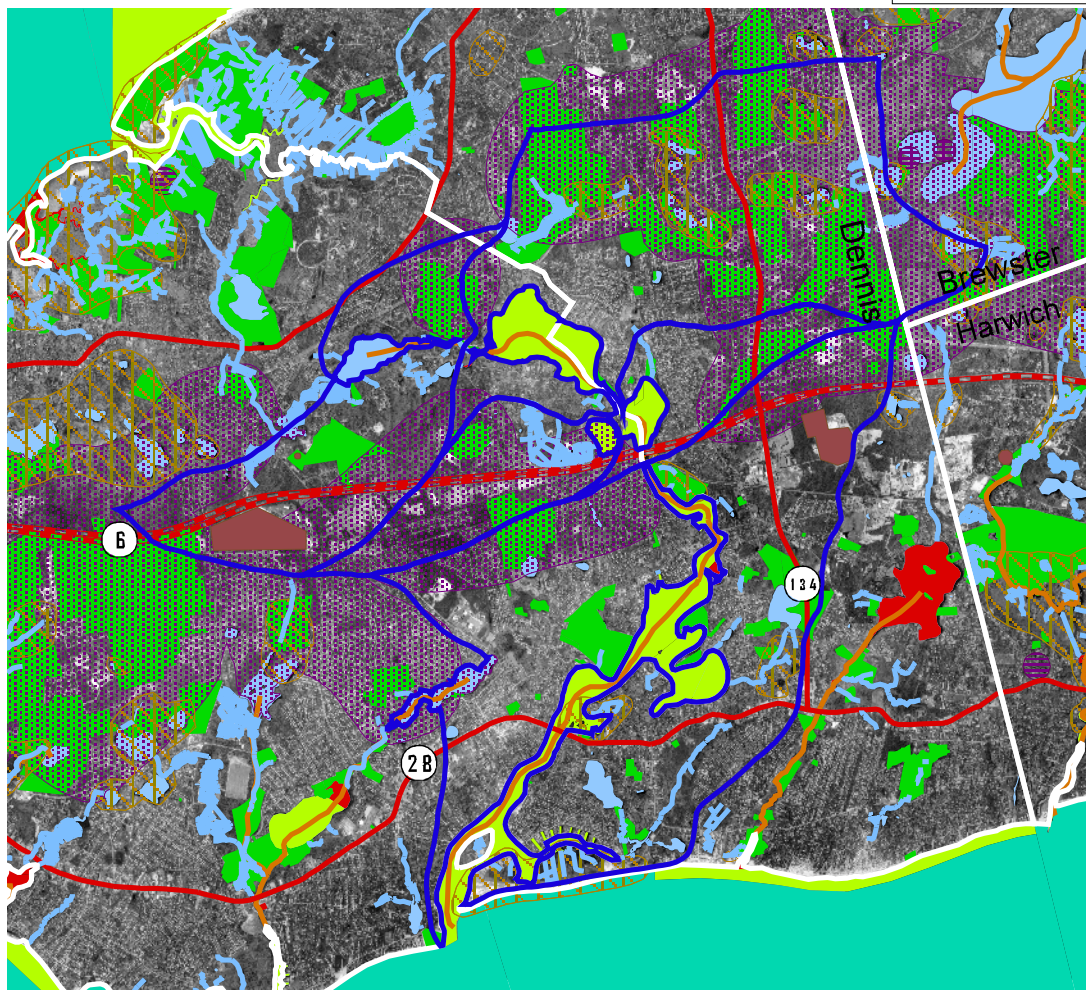
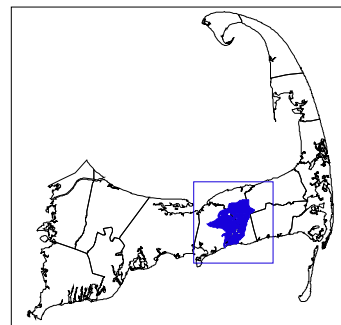
- www.state.ma.us/dfwele/pab/pabSEmap.htm

Public beaches and landings:

- Beaches on Kent Pond and Flax Pond, Salt Box Beach, Windmill Beach, Wilber Park Beach
- Landings on Follins Pond, Kelleys Bay, eight landings on Bass River
- Mayfair Marina on Kelleys Bay, Bass River Marina
- Bass River Yacht Club, West Dennis Yacht Club

Bass River

Dennis, Yarmouth, and Brewster, MA



Watershed Resources



0 0.5 1 1.5 Miles

Natural Heritage and Endangered Species Program Data

- Certified Vernal Pool
- Priority Habitats of Rare Species
- Estimated Habitats of Rare Species

Groundwater Protection Areas

- Interim Wellhead Protection Area
- Zone II
- Solid Waste Facility

Watershed Boundary

Anadromous Fish Run

Shellfish Growing Areas

- APPROVED
- CONDITIONALLY APPROVED
- MANAGEMENT CLOSURE
- PROHIBITED
- RESTRICTED

Open Space

Streams

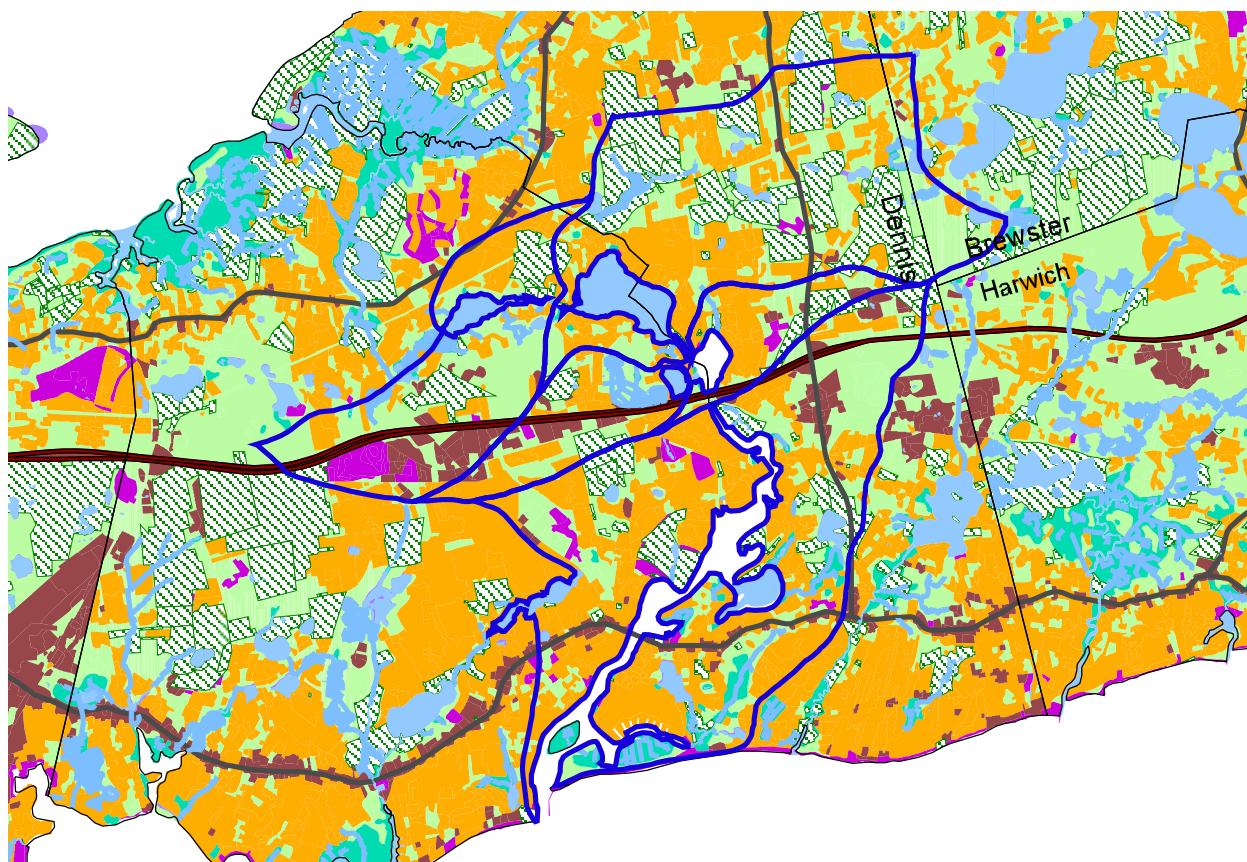
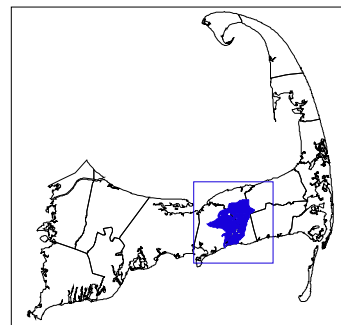
Ponds

Roads

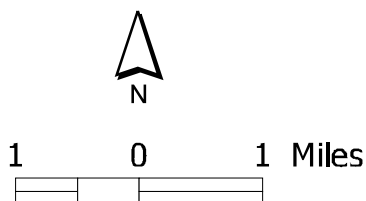


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Land Use



Land Use

